

REMARKS

Claim 14 directed to an electrode material for a lithium-ion secondary battery has been amended to recite the characteristics of the graphite powder as claimed in claim 9. Claims 9 and 10 have been canceled.

Entry of the amendments in the present application is respectfully requested as placing this case in condition for allowance.

Review and reconsideration on the merits are requested.

Preliminarily, Applicants appreciate that claims 1-8 and 15 are allowed.

Claims 9 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyauchi et al, "Anomalous Properties and Structure of Graphite-Bromine Residue Compound at High Temperatures", Carbon, 1976 Vol. 14, pp. 35-38 taken with U.S. Patent 5,344,724 to Ozaki et al.

Miyauchi et al was cited as teaching graphite having an interlayer distance C_0 and a Fe content within the scope of the rejected claims, citing page 36 (i.e., C_0 spacing of 6.728 Å and Fe content of 3 ppm). The Examiner relied on Ozaki et al as teaching the use of micron-sized powder graphite in an electrode. The reason for rejection was that it would have been obvious to form an electrode from the graphite of Miyauchi et al as taught by Ozaki et al.

Applicants respectfully traverse for the following reasons.

There is nothing in Miyauchi et al which teaches or suggests the desirability of forming an electrode material for a lithium-ion secondary battery from the graphite powder disclosed therein. Particularly, Miyauchi et al is a purely scientific study of graphite-bromine residue

compounds, and has no disclosure with respect to application of the starting graphite powder, let alone application to an electrode for a lithium-ion secondary battery. Particularly, Miyauchi et al reacted graphite samples with bromine at different vapor pressures, debrominated to the residue compounds, and then analyzed the resulting graphite-bromine residue compounds (page 36, left-hand column).

On the other hand, Ozaki et al does not teach a graphite powder containing Fe in an amount of 100 ppm or less, as required by amended claim 14, and furthermore, fails to recognize that such impurities impair battery characteristics. For example, the “gas evolution” described at column 2, lines 46-54 indicates that Ozaki et al used a graphite powder containing metal impurities. Thus, there is nothing in Ozaki et al which would motivate one of ordinary skill to employ the particular graphite powder of Miyauchi et al used as a starting material for analysis of graphite-bromine residue compounds.

As mentioned above, claim 14 has been rewritten in independent form, and claim 9 has been canceled. For the above reasons, it is respectfully submitted that amended claim 14 is patentable over the applied prior art, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claims 9 and 10 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Nakamizo et al, “Raman Spectra of Ground Natural Graphite”, Carbon, Vol. 16, pp. 281-283 (1978).

In response, claims 9 and 10 have been canceled, thus making the rejection moot.

Withdrawal of all rejections, and allowance of claims 1-8, 14 and 15 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Abraham J. Rosner
Registration No. 33,276

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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